

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-6 and 21 are pending in the application, with claims 1 and 21 being the independent claims. Claims 1 and 2 are sought to be amended. New claim 21 is sought to be added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Rejections Under 35 U.S.C. § 102

Dingwall

The Office Action rejected claims 1-4 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,521,703 to Dingwall (hereinafter "Dingwall"). (See Office Action at p. 2.) Applicants respectfully traverse these rejections.

Amended independent claim 1 recites (emphasis added):

A latch circuit, comprising:

a bistable pair of transistors connected between a reset switch and a first supply voltage, and having a first port for receiving a first current signal and producing a first output voltage, and a second port for receiving a second current signal and producing a second output voltage; and

a vertical latch having a first transistor and a second transistor and connected between said first supply voltage and a second supply voltage, said first transistor connected to said first port so that, when said first transistor is turned on, a current flows *from* said second supply voltage through said first transistor *to* said first port, said first transistor is a first type, said second

transistor is a second type, and said first type is different from said second type;

wherein said bistable pair of transistors is connected directly to said first supply voltage.

Dingwall does not disclose, teach, or suggest a latch circuit having a bistable pair of transistors and a vertical latch in which the bistable pair of transistors is connected between a reset switch and a first supply voltage and has a first port for receiving a first current signal and producing a first output voltage and a second port for receiving a second current signal and producing a second output voltage, and in which the vertical latch has a first transistor and a second transistor and is connected between the first supply voltage and a second supply voltage, wherein the first transistor is connected to the first port so that, when the first transistor is turned on, a current flows from the second supply voltage through the transistor to the first port, wherein the first transistor is a first type, the second transistor is a second type, and the first type is different from the second type, and wherein the bistable pair of transistors is connected directly to the first supply voltage.

The Office Action at page two contends that:

Figure 3 of Dingwall shows a latch circuit comprising a bistable pair of transistors (P11, P21) connected between a reset switch (P3) and a first supply voltage (Vdd), and having a first port (O1) for receiving a first current signal (current flows along the transistor N1) and producing a first output voltage, and a second port (O2) for receiving a second current signal (current flows along the transistor N2) and producing a second output voltage, and a vertical latch (P1, P2, N1, N2) connected between said first supply voltage and a second supply voltage (Vdd and ground), and connected to said first port (O1), said vertical latch having a transistor (N1) connected to said first port, when said transistor N1 is turned on, a current flows from said second supply voltage (ground) through said transistor to said first port, wherein said reset switch is configured to couple said first port directly to said second port and said bistable pair transistors are connected directly to said first supply voltage as called for in claim 1.

Applicants dispute this contention. Contrary to the characterization in the Office Action, when the transistor (N1) of figure 3 of Dingwall is turned on, a current flows from the first port (O1) through the transistor (N1) to the second supply voltage (ground), *not* from the second supply voltage (ground) through the transistor (N1) to the first port (O1). Therefore, Dingwall does not anticipate claim 1. Because claims 2-4 depend upon claim 1 and because of the additional distinctive features of claims 2-4, these claims are also not anticipated by Dingwall. Therefore, Applicants respectfully request that the Examiner reconsider and remove the rejections of claims 1-4 under 35 U.S.C. § 102(b) with respect to Dingwall.

Zerbe

The Office Action rejected claims 1-6 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,977,798 to Zerbe (hereinafter "Zerbe"). (See Office Action at p. 3.) Applicants respectfully traverse these rejections.

Amended independent claim 1 recites (emphasis added):

A latch circuit, comprising:

a bistable pair of transistors connected between a reset switch and a first supply voltage, and having a first port for receiving a first current signal and producing a first output voltage, and a second port for receiving a second current signal and producing a second output voltage; and

a vertical latch having a first transistor and a second transistor and connected between said first supply voltage and a second supply voltage, said first transistor connected to said first port so that, when said first transistor is turned on, a current flows from said second supply voltage through said first transistor to said first port, *said first transistor is a first type, said second transistor is a second type, and said first type is different from said second type;*

wherein said bistable pair of transistors is connected directly to said first supply voltage.

Zerbe does not disclose, teach, or suggest a vertical latch having a first transistor an a second transistor in which the first transistor is a first type, the second transistor is a second type, and the first type is different from the second type. The Office Action at page three contends that transistors 110 and 111 at figure 3 of Zerbe comprise a vertical latch. Applicants dispute this contention. However, even if, *arguendo*, transistors 110 and 111 do comprise a vertical latch, they are both pfets. (See Zerbe at column 3, line 28.) Therefore, Zerbe does not anticipate claim 1. Because claims 2-6 depend upon claim 1 and because of the additional distinctive features of claims 2-6, these claims are also not anticipated by Zerbe. Therefore, Applicants respectfully request that the Examiner reconsider and remove the rejections of claims 1-6 under 35 U.S.C. § 102(b) with respect to Zerbe.

New Claim

Applicants have added new independent claim 21, which recites (emphasis added):

A latch circuit, comprising:

 a first transistor coupled between a first port and a supply voltage;

 a second transistor coupled between a second port and said supply voltage; and

 a **microelectromechanical** reset switch coupled between said first port and said second port;

 wherein said first transistor and said second transistor are configured in a bistable pair, said first port is configured to receive a first current signal and to produce a first output voltage, and said second port is configured to receive a second current signal and to produce a second output voltage.

Support for new claim 21 can be found in the specification, *inter alia*, at paragraphs 10, 75, 79, 92, 99, and 109. Neither Dingwall nor Zerbe, alone or in combination, discloses, teaches, or suggests a latch circuit having a microelectromechanical reset switch. Each of Dingwall and Zerbe discloses a latch circuit in which the reset switch is a transistor, a device in which

the switching action is solely electronic and in no part mechanical. Therefore, new claim 21 is not anticipated by and is patentable over Dingwall and Zerbe. Accordingly, Applicants respectfully request that new claim 21 be passed to allowance.

Conclusion

All of the stated grounds of rejection have been properly traversed. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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